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USE OF AUDIOVISUAL RECORD IN A MUSIC GROUP FOR CHILDREN WITH AUTISM¹

ABSTRACT

This article uses the analysis of a music group for children with autism to discuss the use of audiovisual record. First, the procedures employed in the sessions, as well as the registration and analysis methodology, are detailed. Next, the analysis of a recorded segment is presented, illustrating the general results of the research. Questions regarding the therapeutic dimensions of music are emphasized, along with a discussion about the relationship between music and subjectivity, highlighting the contributions of ethnomusicology. Finally, considerations are made on the use of the audiovisual record and methodologies of analysis, in addition to the main conclusions obtained.

keywords

Music; Autism;
Audiovisual; Microanalysis;
Ethnomusicology

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INTRODUCTION

Autism is a child development disorder characterized by severe impairments in social interaction and communication skills, or by the presence of stereotyped behaviors, or restricted interests and activities, defined both by its early onset (first three years of life) and by a chronic evolutionary tendency. Autism is also considered to involve quantitative and qualitative changes in the subjective experience, cognitive processes, communication, and perception. These dysfunctions affect the individual integrally, so autism does not correspond to a delay or interruption of the typical development process, but to a global developmental disorder, whose effects extend throughout life and affect its different areas, i.e., psychomotor, affective, cognitive, linguistic, social, etc.

Despite having achieved a prominent position in the field of psychopathology, the concept of autism remains relatively imprecise. It describes both children who speak and others who do not, children with little or no social contact and others with an eccentric type of relationship, children with mental disabilities and others with a cognitive level appropriate for their age (Lampreia 2004). As a result, epidemiological studies also show significant variations, ranging from 15 per 150,000 (Associação Americana de Psiquiatria 2002) to approximately 11 per 1,000, i.e., one child in 88 (Baio 2012). Regarding its aetiological aspects, the lack of consensus is even greater, to the point that there are as many definitions of autism as the various theories that intend to explain it (Leboyer 2007). Attempts to establish a biological, genetic, neuroelectrical, or neurochemical marker have not yet reached conclusive results, and even changes in the neurological functioning evidenced by brain imaging are unable to establish the relationship between brain activity and specific symptoms. Finally, there are also few agreements on possible prognoses, making autism a rare case among clinical conditions, most of which follow a known and predictable trajectory.

In the midst of a scenario where much is speculated about the reasons that lead a subject to present development problems such as autism, the analysis of films – especially those produced by the families themselves – has been throwing strong arguments in solving this impasse. Massie (1978), for example, by investigating home movies with infants who were later diagnosed with autism, clearly showed the parents' states of awareness of the child's lack of responses, providing an empirical basis for criticizing the notion that the syndrome was related to cold or unfriendly caregivers. In a sample of videos recorded during the first year of life, Muratori and Maestro (2007) found fewer responses to the mothers' attempts to establish interactions by children with autism than by those who would not develop the syndrome. However, some children with autism could demonstrate social behaviors such as exchanging looks, smiles and even joint attention or pointing actions, but their frequency was lower than that of other children.

Thus, as summarized by Wing and Gould (1979), the autism spectrum corresponds to a set of syndromes whose nucleus is a social deficit that begins in early childhood. Trevarthen et al. (1998) also consider it a disturbance of the innate mechanism to relate to the other, so that the functions of language – and the thought processes based on it – would be affected in people with autism because intersubjective functions are impaired practically from the beginning of life. The study of home video of a pair of twins of whom a sister would later be diagnosed as such, by Trevarthen and Daniel (2005), confirms that the disturbance in the development of interpersonal sympathy is an effect of the absence or low frequency of intersubjective behaviors, contrary to what would be expected in a typical development case. Differences in behavioral, emotional, or cerebral functions would therefore be the result of deficiencies in the sharing of attention, intention, and affection, at a time when the encounter with otherness is fundamental.

Without the exchange of expressive responses, the child does not fully participate in the communicative and emotional transactions with others, which severely compromises their organic and psychic development. Such impairment of social relations in early childhood gives rise to the associated symptoms, since it reduces the movements of mental orientation that occur in response to the stimuli of the other, which affects the development of thought and impoverishes the imaginative life (Hobson 2002). As these individuals grow, the problems found in these early dyadic interactions extend and affect how they interact with the rest of the social group, as well as their learning of cultural conventions.

In this same line, for Ochs et al. (2004), one of the main difficulties faced by subjects with autism in the recognition of intentions and psychological states, refers to socio-cultural decentration, i.e., the adoption of the other's point of view through the "members' awareness of 'behavioral expectancies' associated with socially and culturally organized situations" (Ochs et al. 2004, 156). By analyzing 381 hours of video and audio from 16 children diagnosed with autism, from 8 to 12 years old, these researchers found several moments in which they made perspective-takings in situations of daily interaction, with family members at home, going to and coming back from school, and with peers and teachers. The three domains in which this occurred were the participation in turn-takings and conversation sequences, the formulation of situational scenarios and the interpretation of socio-cultural meanings of indexical forms and behaviors.

Despite the tendency to persevere in their topics of interest, and to hold conversations interspersed with silences, these analyzes indicated that subjects with autism often engage in conversations with turn-takings at appropriate transition places, even engaging in discussions without pauses or overlaps between the lines. This suggests that these difficul-

ties are not related to a cognitive difficulty, but to the vulnerability of these children to the challenges of the pragmatic function of language.

It is possible that we find here the reason why music-based techniques – which facilitate communication through sound and movement, without the constraints of the linguistic determination of meaning – are successfully employed in the treatment of individuals with developmental problems. Several studies on music therapy confirm how it can be used to improve their interacting and expressing abilities (Gold, Wigram and Elefant 2008), increase their communicative acts and responses (Edgerton 1994) and, in long-term applications, modify and develop their patterns of social relationship (Schumacher and Calvet-Kruppa 1999). As Trevarthen (1999, 8) states, music is therapeutic “because it sharpens the mind’s essential efforts to regulate the body both in its internal processes and in its purposeful engagements with the objects of the world and with other people”, while language is not necessarily involved in this intermediation.

Although the therapeutic effects of music in cases of autism and other developmental problems have already been discovered and exploited for a reasonable time (Benenzon 1977, Nordoff and Robbins, 1968; 1977), the reasons why this occurs or the underlying mechanisms to its action are not yet completely elucidated. For this reason, it is increasingly necessary to understand how music produces effects of this nature and what kind of interventions prove to be the most effective in this regard. To discuss these aspects, this article uses the analysis of the audiovisual record of a music group with four children with developmental problems. First, the procedures used in the sessions, as well as the record and analysis methodology, are detailed. Next, the analysis of a recorded segment is presented, illustrating the general results of the research. Questions related to the therapeutic dimensions of music are emphasized, along with a discussion about the relationship between music and subjectivity, highlighting the contributions given by ethnomusicology. Finally, considerations are made on the use of the audiovisual record and the methodologies of analysis, in addition to the main conclusions obtained.

PROCEDURES

The music group sessions were conducted at the Center for Therapeutic Education of the Institute of Psychology of the University of São Paulo, within a program of treatment of childhood psychopathologies that also includes a group of varied activities such as playing, games, writing, etc., and weekly one-hour individual therapy sessions, offered by a graduate student on an internship basis, or by a psychologist of the Center. In addition to these professionals, these interns also participated in the music group sessions, sharing the activities, accompanying the children who for some reason did not participate in the group and recording the group sessions on a video camera. After that, the entire staff

would meet for one hour to discuss the individual and group sessions of the week, discussing clinical issues and of direction of treatment, in addition to planning coordinated strategies to be employed at both levels of care.

The procedures carried out during the clinical sessions were musical improvisations, musical games and the re-creation of songs. The proposed task was to *make music*, stimulating the use of various musical instruments, such as drums, toy xylophone, caxixis, flute, pan flute and assorted whistles. The instrument chosen by each one was presented at the beginning of the session, when we sang an opening song, and the same occurred at the end, with a closing song. In one of the sessions, the group constructed some instruments from recyclable materials, such as PET bottles of various sizes, broomsticks, bean and rice grains, etc., which were used in the subsequent sessions.

The group sessions were recorded with a digital video camera, and the material was analyzed at different times of the research: at supervision meetings, where portions of the sessions were used to support the discussions; in the edition of an end-of-year video, in which scenes were selected to be presented to the participants and their parents; in the elaboration of case studies, in which the images allow the illustration of an argument or the better understanding of some specific event. These repeated visualizations of the material provided the researcher with a familiarity with the occurrences and the accompaniment of the therapeutic process as a whole. In order to write the case studies, the collected material was viewed and annotated minute by minute. Some segments were selected for further analysis when they provided a better understanding of data that would be difficult to capture during the sessions.

These segments were then analyzed through image freeze, slow motion, frame-by-frame and loop playback. This approach is called microanalysis, and can be defined as a method for investigating microprocesses, i.e., processes and changes occurring in short periods of time. It allows to accompany “*minimal changes in relationships or interactions between people or minimal changes in the music and in dynamic forces*” (Wosch and Wigram 2007, 14, emphasis in original) that occur in a clinical situation. The duration of the analyzed segments is variable, and a process can be monitored over time, with several microanalyses being conducted for different events.

The description of the segments was carried out in written language, musical scores, and acoustic analysis charts. This material was then incorporated into individual case studies of the children participating in the study, based on data collected during the reception interviews, scenes that occurred during the individual and group sessions – followed by analyzes and reflections on the planned and conducted interventions –, as well

as discussions by the clinical staff. Next, we present a fragment of the case study of a participant we will call Camila. This study illustrates how audiovisual records are used, followed by some of the survey results.

RESULTS

Camila is six years old and is the eldest daughter of her family. She had a normal childhood until her first year and a half, when she had a series of epileptic seizures. This disrupted her development in some way, for she stopped talking and looking into the eyes, according to her mother's account. Over time, this extended to a severe detriment to her relationship with others, which are often ignored, or approached in an instrumental way to achieve a particular goal, for example, when she uses someone's arm to reach an object. By the time the treatment started, she had a much reduced speech output, with few words like "no" and "bye", and other vocal sounds. Nor did the words we spoke offer her a chance to reassure herself in the face of her anguishes. We soon identified a serious impairment of phantasy, whether by the limitation of imaginary production and narrative engagement, or by the mechanical use of objects. Her playing was often confined to the concreteness of materials, and graphic productions denoted symbolic poverty, for example, when she overlapped layers of paper and glue indefinitely.

In her individual sessions, Camila demonstrates from the beginning a great interest in the sounds of objects, animals and the body, demonstrating that this is a way for communicating and sharing an experience with the other. However, this does not facilitate her entry into the music group, and from the beginning she shows a strong resistance to participating. Several hypotheses have been raised regarding this, but none has been fully explanatory. There were two ways we found so that Camila could attend the group. Firstly, allowing her to occupy the corridor and a room next to the music group room, where she was offered toys and her favorite instruments, such as the flute and the pan flute, and the company of an adult. This flexibility made it possible, even at a distance, to reach the music. This is how, when we start playing the song "O pato pateta"², in one session, she immediately utters the word "duck". A second *concession* was allowing the presence of her mother in the corridor outside, keeping the door open so that Camila could move freely between the music space and the maternal proximity. In the same way, instruments are offered to accompany the group, along with invocations such as *what will Camila do?*, or *what is the song that Camila wants to play?*. Along the same lines, at the end of the session, she can participate in the closing song from a distance, and time is given for her to play the instrument. With the aid of the video, we confirm that in a session – she is outside the room, but standing in front of the entrance door –, she swings the pan

2. Literally, "The whacky duck", a traditional Brazilian children's song.

flute by the cord that is tied to the instrument, striking it on the floor in a rhythm coordinated with that of the song we are playing. Her eyes are fixed on the mother standing before her, and the smile on her face is clear as she rattles the instrument, contrasting with the reproachful countenance of her mother, probably because she feels her daughter is doing something wrong. It is therefore not possible to interpret whether Camila's joyful expression refers to an attempt to show to the mother her interest and satisfaction with music, or a defiant posture for the alleged transgression.

The maternal presence not only reassures her, but also assists towards her participation, in moments when Camila is summoned by the songs to say her favorite food, or the gift she wants for Christmas. We always give her the opportunity to express herself, but when that does not happen, it is the mother or someone else who responds for her. It is this alternation between presence and absence that sustains another direction of treatment for Camila, focused on sustaining a place that is her own, from where she can interact with the group. Sometimes she produces no expression, leaving us in doubt as to whether she actually ignores us or does not understand our invitations. In others, she plays an instrument, or emits a vocalization, which is usually celebrated by the staff. However, when analyzing the videos, we can see several moments in which she occupies this space that we offer, but that go unnoticed due to the way she does. When asked to play an instrument in the closing song of a session, for example, she bangs the strings of the guitar gently and moves back in front of the mirror with her back to the group. No one realizes that she does what we had asked for, and the group insists on an answer, which seems to increase her anxiety.

It takes, therefore, an acute sensitivity to perceive such events of subtle interaction. In the opening song of a session, for example, there is an interaction between Camila and another participant – who will be called Mathias –, which indicates a surprising connection between them. We are sitting together with Beatriz, who assists in the coordination of the group, and Camila, who is lying in the center. Mathias chooses the rain stick, or *rattle-hourglass*, as he calls it, while Camila chooses a common rattle (Figure 1).

figure 1
Illustration of
the re-creation
of the opening
song of the
music group.



Both instruments had been constructed in an earlier session. The transcription of this segment (Figure 2) shows that Camila imitates and accompanies Mathias' movements with synchrony. She repeats with the rattle the gesture of inclining the instrument and letting the pebbles fall slowly, just as he does with the rain stick in the first few bars. I have not yet begun to sing and there is already an alternation between what one and the other plays, as a call and response game that develops at a fairly defined rhythm.

figure 2
Transcription
of re-creation
of the opening
song in the
music group of
11/29/13.

Andante

The musical score consists of several systems of staves. The first system includes Guitar (Daniel) and Rainstick (Mathias). The second system adds Rattle (Camila). The third system adds Whistle (Camila) and includes the instruction "hitting the base of the rattle" circled around a specific rhythmic pattern. The fourth system adds Voice (Daniel) with the lyrics "A o - fi - ci - na de mú - si - ca já". The score uses various musical notations including treble clefs, stems, beams, and dynamic markings such as *fz*.

Guitar (Daniel)

Voice (Daniel)
vai co-me-çar Qual o ins-tru-men-to que o Mathias vai to-car?

Rainstick (Mathias)

"rattle-bonglav"

Guitar (Daniel)

Voice (Daniel)
A o - fi - ci - na de mú - si - ca já vai co-me-çar.

Rainstick (Mathias)

Whistle (Camila)

"rattle-bonglav"

Largo

Guitar (Daniel)

Voice (Daniel)
Qual o ins-tru-men-to que a Camila vai to-car?

Rainstick (Mathias)

Rattle (Camila)

Rainstick (Camila)

Whistler (Mathias)

Camila takes the whistle

Mathias takes the whistle

Legend

inclining the instrument until pebbles reach the other side (duration is given by the bar)

They practically do not overlap, each takes one place and only begins to play when the other stops. Along with the rattle, Camila begins to blow a whistle, which also interacts with the rainstick. When I summon Mathias to present his instrument, Camila watches him closely. However, when her turn comes, and she shakes the rattle, Mathias turns the rainstick again. She then gets up and grabs that instrument, leaving the whistle in its place. Mathias takes the whistle, and they play together, finishing the segment.

This moment that we all shared together, and in which the interaction between Camila and Mathias allowed a form of non-verbal communication including turn-taking, would be unimaginable at the beginning of her treatment. It is remarkable how Camila found new ways of relating to us, overcoming a severe loss of the bond with the otherness. Throughout the sessions, we were able to follow how her playing acquired other meanings, allowing her to participate in the collective staging of characters, and somehow interact and communicate with the others. However, even though she participated relatively less than the other children, some of the activities we proposed were important times to experience a different contact with adults and other children. Her progress is intriguing for the entire staff, and it produces optimism and hope about the possibilities of her recovery.

DISCUSSION

Starting from this vignette, we can articulate some results of the research. In short, musical practices involving songs and musical games have demonstrated therapeutic effects for children with developmental problems, which can be understood in their intersubjective, intrapsychic and sociocultural dimensions. At an intersubjective level, emphasis is given to the way in which the musical experience provides an organized encounter with the otherness, so that several activities of the group generate possibilities of engagement in the motives of the other, thus facilitating social interaction, whereas dances and games guide processes of imitation, synchronization and rhythmic coordination of movements. The interactive nature of the different activities indicates that they affect the quality of the social bond, producing situations of mutual adjustment of intention, attention and affection, exchange of expressive signs and mental orientation, turn-taking and sharing of an external pulse.

Concerning its intrapsychic effects, the musical experience can be therapeutic not only because of the pleasure it produces in the listener – especially if we consider the attraction exerted by it, even in children with a greater social isolation – but because it provides formal parameters that affect the subjective experience, altering the way we perceive, interpret and evaluate the reality, activating certain feelings and sensations, intensifying our energy levels and concentration. Such contours of activation operate as an envelope of experience, which does not refer to its content but to its form, so that the various expressive qualities that characterize and provide meaning to the sounds and movements of the body, also modulate forms of play and phantasy. Circle and alternating games played a prominent role in this sense, offering a temporal structure in which expressive elements could be ordered, favoring psychic organization. These modalities of experience correspond to a new perception of reality, so that, with music, children can really feel themselves

and the world in another way, and accomplish what might have been impossible before. In addition, the musicality of infantile subjectivity, inherent to the spontaneity and intuitiveness of its music, makes these forms easy to share and assimilate.

Regarding body movement, choreographies affect the perception of music in the body and the process of body image construction, which possibly explains the increase in the fluidity of expressive gestures and the coordination of body movements, which have proved problematic for some children. In part of the choreographies we performed, there was a momentary difficulty in following the movements of others, related to imitating them in a wrong way, in a delayed time or simply not performing them. During the treatment, a development of this aspect could be identified, with an improvement in the quality of the movements, in terms of synchrony, coordination and adjustment of speed, direction and intensity.

A third way of understanding the therapeutic effects of music is found on a socio-cultural level, essentially because it includes the subject in the order of the aesthetic productions of his social group. It is not possible to minimize the permeability of children to music and the songs transmitted by the media, and their performances can be very faithful to the original, even when the therapist is mistaken in the recreation of a song known by them. Music thus contributes to the constitution of a cultural being, but not only in the sense of learning a tradition and its particular symbolic objects and practices. More importantly, at least in the realm of developmental problems, the very fact of the social determination of meaning, and the way in which it occurs, matters. Lived daily with fear by children with autism, this process is experienced in the sessions in a way that is neither invasive nor absolute. More than organized, the encounter with the otherness in the music group is a safe meeting.

In short, and according to DeNora (2013), musical experience is therapeutic when it offers some sort of asylum, a pause of anguish, and a place and time in which it is possible to flourish, that is, the “ability to feel as if one is in the flow of things, to be able to feel creative and to engage in creative play, to enjoy a sense of validation or connection to others, to feel pleasure, perhaps to note the absence, or temporary abatement, of pain” (DeNora 2013, 1). In fact, Trevarthen and Malloch (2000) argue that the characteristic of music that explains its therapeutic properties is its ability to create conditions for emotional and cognitive well-being, and that, in this facilitating context, the individual would be able to resume the functions affected by the disease. Although the results of the music group support this idea, considering how activities were an obvious source of pleasure and joy for children, they also indicate a deeper and more radical bond between music and the constitutive processes of the

psychic subject. In fact, the effects of music are not only secondary in the sense that it would promote an environment where transformations could occur. These changes occur in the musical action itself, and can be expressed in musical terms. The intensity of the musical experience suggests that it is directly involved in the operation of these mechanisms.

Similarly, music has been used by various social groups in different historical and geographic locations to “restore certain kinds of order in their world, and also create new kinds of order in it” (Seeger 1987, 128). Each musical performance reestablishes the relationships between the elements that make up the universe created by human beings and in which their lives unfold. On each of these occasions, they not only reveal their identities but also ground new ways of perceiving and being perceived by the others. Singing, jumping and dancing are not only ways of expressing a reality, but modes of operating a metamorphosis of the world and of oneself. Music is thus used in the joint construction of shared relationships and experiences, in establishing opportunities for empathic connection and expressive forms of communication, as “resource for the ongoing constitution of themselves and their social psychological, physiological and emotional states” (DeNora 2004, 47).

In this sense, this theoretical approach is close to ethnomusicology, a discipline that provides not only a theoretical and methodological framework for an application of its concepts, but also implies an epistemological reconsideration of the concept of subject, and the way in which it is thought in the human sciences. We refer here to the point of view of Musical Anthropology, specifically its shift from the study of music as a cultural product for the study of social processes in relation to music, or, in the words of Seeger (1987, 138, 140), the “study of music as an approach to the study of social processes in general”, which are to be thought “as intentional performances, ‘structurations’, and creative solutions within a field of patterns and within certain perceived historical situations”. In this perspective, music is a source of culture and structure (Blacking 1995), since musical performances, rather than reflecting reality, actually order social life and the categories by which space, time, body and identity are defined.

In the perspective of a Musical Psychology, therefore, the subject, rather than producer of musical phenomena, should be considered the result of them, in a process of musical construction of subjectivity. As we have seen in this research, music has an extraordinary ability to affect the most basic categories that define our experience of reality. This indicates that there is no a priori subject who learns and sings the songs of a group. Only then can we understand Blacking’s (1985, 53) enigmatic assertion that “there is a sense in which a composer is composed and a pianist is played”. We do not exist before the music, but simultaneously with it, we are effects of music.

Thus, music is not only shaped by the psychic forces of the subject, it is in fact a dynamic medium of psychic life, something in which the mind happens. Like any art form, it deals with problems and concepts, and “responds to problems about determination regimes and possibilities for the reorientation of categories such as identity, difference, relation, unity, among others” (Safatle 2006, 169); and such solutions are useful in the problems we face in the process of living and developing. This is due to the fact that its formal aspects both affect what in the mind remains informed, and lead what was crystallized to transform. Music, therefore, need not be seen as separate from subjectivity, but something through which psychic functions are constituted and operate in a specific way corresponding to its expressive qualities. Thus, just as musical form and experience are directly linked to processes of subjective constitution, in the horizon in which music and subject are intertwined, we find the parallel between aesthetic formalization and the processes of subjectivation, between the genesis of the work of art and the genesis of the subject. Thus, it is really possible to be “the great experimenter with himself” (Nietzsche 1987, 136), because, since “the self is not given to us”, as Foucault points out, “we have to create ourselves as a work of art” (Rabinow and Dreyfus 1995, 262).

In this sense, therapy represents a form of musical composition of reality, using music as an aesthetic technology of the self (DeNora 1999). And when this power is expressed in a spontaneous and intuitive way, as with children, this creative dimension assumes its fullness. “Children only ‘become’ sound gestures guided by the wholeness of their way of being and organizing themselves continuously... a kind of *music-children*: children transmuted into sounds” (Brito 2007, 80, emphasis in original).

Therefore, rather than expressing, the value of music is to produce and to transform, as well as the narrative, which at the same time as it is told, alters the subject’s life history (Bruner 1991; 2004). It is precisely in this sense that, when asked about the reasons that had led him to write music, composer John Cage replied: “What I do is not to express, but to change myself” (Campos 1998, 147). And for the concept of expression to be understood in this perspective, it is required that what is expressed does not separate from the act that produces it, nor fail to produce an act, in the sense Lacan (1986, 129) gave to the concept of the full word: that one by which the subject “finds himself other than he was before”.

At a methodological level, the proposed description and analysis procedures may be of some value in the sense of reversing the current methodological paradigm between psychology and music and thus orient a hybrid research, pertaining to psychology as to its contents and to music as to its methods. Without ignoring the role that otherness plays in this process,

we follow Didier-Weill (1997, 240) when he states that “we do not hesitate to declare that a theoretical reflection on music is one of the possible ways to understand the most primordial relationship of the subject with the Other”. Perhaps this way, we would understand how an artistic appreciation of time is capable of reorganizing the symbolic field and reordering the most fundamental categories of experience. This should be the emphasis of a study of modes of subjectivation in relation to music; a three-dimensional problem, at the same time aesthetic, social and psychological.

A psychology of music that accompanies the evolution of these questions, as they have been approached on in other fields of knowledge, could offer a relevant contribution to a series of questions. If, on the one hand, psychology already has a history of interacting with other perspectives from the humanities – proving to be a flexible field for the incorporation of theories and methods from other disciplines for the accomplishment of its ends –, on the other, such perspectives can perfectly appropriate conceptions from psychology. A notion of a subject other than that of I or agent could be that contribution. For a conception of the subject as an unconscious psychic instance would certainly be useful in these investigations, broadening our understanding of phenomena related to music in the light of the subjective constitution.

CONCLUSION

As a conclusion, the use of the audiovisual register was positive for the purposes of the investigation. The selection of scenes for the case study is something that goes through the researcher’s sieve, and in this sense is subject to his interpretation. On the other hand, it is possible to emphasize the fundamental role that clinical staff meetings play in the enrichment of this process, both by the multiplication of clinical work perspectives and by the discussion and joint construction of the cases.

Microanalysis, in turn, proved to be adequate for the study of musical events and processes. It could be employed as a support for classical descriptive methods, without suppressing the investigator’s subjective impressions, which are their fundamental characteristic. The case study made from verbal registration and microanalysis prevents the former from losing its objectivity, and the latter from omitting the spontaneity that is implied in the musical practice. Despite the inconvenience of requiring great effort and time from the researcher to be carried out, this method has several advantages. Its application is not only restricted to the study of events and processes, but can also be used in the selection of scenes that will be submitted to the analysis, since it offers a global perception of the recorded situation. Audiovisual records amplify the perception of details that would hardly attract our attention in the concrete situation in which they occurred. An example is when,



contrary to what we thought, it turns out that Camila really had played the guitar, very subtly, in response to our request. When other people are involved with the record task, details that were not available to the researcher can be retrieved and analyzed, such as when Camila is out of the room and plays with the pan flute in the rhythm of the song we are singing. In this sense, audiovisual support for clinical work can be extremely advantageous in that it broadens the perceptual possibilities of therapists and researchers, bringing to the surface elements that would otherwise remain unconscious.

Microanalysis consists of a methodology that seeks to overcome at least two classes of difficulties specific to the analysis of audiovisual materials: the limitations of observation in terms of simultaneous events and their relations; and the discrimination of the variable time in the monitoring of changes and variations of individualized processes. It allows us to conduct studies on these changes “*while they are occurring*”, and its results “suggest ideas about the mechanisms that produce the changes, and also provide data against which to evaluate the plausibility and power of potential mechanisms” (Siegler and Crowley 1991, 606, emphasis in original). All these are phenomena that develop over time, whose nuances and complexity are difficult to grasp in real time, and, in this sense, microanalysis is often referred to the microscope metaphor (Bull 2002, Beebe 2014), given the wealth of details that it provides, and that would go unnoticed to other forms of analysis.

For Bateson (1996), this microscopic dimension reflects the macroscopic one, i.e., longer cycles are extended repeats or repeated reflections of patterns found in the minor details. One result of microanalysis would thus be a record of small amounts of data capable of leading to insights into human interactions that could not be obtained otherwise, not even through long-term observation or anamnestic reconstruction.

This is an aspect of special relevance for the studies of the therapeutic effects of certain clinical practices, understanding such movements as changes in patterns of expressive and social conduct, which in turn indicate the transformation of subjective processes. Microanalysis allows examination of the contours of interactions that are not visible when written transcription is the only means of recording. Therefore, it offers a more powerful tool than the ethnographic or conversational analytical methods usually employed in studies of social interaction, and may even overcome failures in the record through real-time observation of the communicative behavior of children with verbal and non-verbal communication difficulties.

The audiovisual record of the group thus indicates, in addition to the difficulties in the relationship with the other associated to autism, a series of social skills; and points out that they influence the therapeutic pro-

cesses occurring in the treatment. As we saw in Camila's case, the perception and understanding of social interactions is problematized when analysis and description tools more robust than simple observation are used. This result corroborates studies demonstrating that a portion of sociability is maintained in children with developmental problems.

Audiovisual records also confirm the notion, already widespread among those who work in the clinic of developmental problems, that many healing movements occur in situations where there is the assumption of a subject for the child. Utterances about what the individual is doing or what are his preferences and desires are ways of invoking a latent subjectivity, which may nonetheless come about. And even when it is the mother or another person who answers these questions, there is the same strategy of anticipating the existence of a subject, even where it does not manifest. This idea is based on the fact that such assumptions are present in the formation of the first bonds between the mother and the baby, when he is not fully constituted as a self or a subject. When the child cries, for example, we are often unaware of the reason, but soon we say that he is tired, cold or hungry. Such movements are fundamental to the subjective constitution, and are inserted in the dialectic of the processes of primary identification and mutual recognition.

With regard to the specifically musical dimension of treatment, it can be concluded that music is an active ingredient in this process, the result of which is a movement of transformation of psychic functioning. This is possibly the nucleus responsible for the clinical uses of music. In this way, clinical work with music and songs for children with developmental problems has proved to be less expressive than creative. It is the invention of solutions to the problems of the constitution of subjectivity that have arisen in the trajectory of their development, especially in relation to their relation to otherness.

translation

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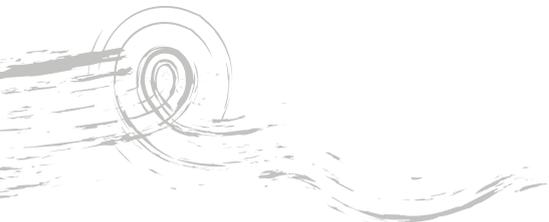
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